

Maryland is a premier location for life sciences companies. With one of the nation's largest clusters, a community of more than 2,000 life science businesses have unparalleled proximity to leading federal institutions such as the National Institutes of Health, National Institute of Standards and Technology and the Food and Drug Administration. More than 90 percent of the life sciences companies and strategic partners are located within one hour of each other. Companies also can take advantage of two-hour access to 80 percent of the U.S. pharmaceutical industry. The state is a major recipient of National Institutes of Health research and development dollars, and Johns Hopkins University is first in the nation in total NIH awards. The state's 2,120 life sciences organizations generate \$16.99 billion in economic activity.

Major Life Sciences Employers in Maryland

Employer	Employment	Product / Service
MedImmune*	2,290	Biologics R&D and manufacturing
Westat**	2,280	Contract research and statistical surveys
Leidos Biomedical Research	1,870	Contract research
BD Diagnostics	1,600	Medical devices
Quest Diagnostics	1,200	Laboratory services on biological samples
Otsuka America Pharmaceutical*	630	Biopharmaceuticals R&D
U.S. Pharmacopeia**	600	Standards-setting authority for medicines and healthcare products
GlaxoSmithKline (GSK)	540	Biologics manufacturing
Lonza Walkersville*	520	Supplier of stem cells and tissue culture products
Pharmaceutics International (PII)**	480	Pharmaceutical contract manufacturing

Note: Employment counts are rounded.

* Foreign-owned company with U.S. headquarters in Maryland.

** Headquartered in Maryland.

Source: Maryland Department of Business and Economic Development, April 2014.

Selected Rankings

- Maryland has the highest concentration of employed doctoral scientist and engineers. The state ranks first in employed PhD scientist and engineers per 100,000 employed workers (1,288), with first place rankings for total PhD scientists (1,031), as well as PhDs in biological sciences (466) and health (83).
- Johns Hopkins University ranks first among U.S. colleges and universities in total National Institutes of Health awards, including grants and contracts for research, development, training and fellowships (\$575 million).
- According to U.S. News & World Report's Best Colleges survey, Johns Hopkins University holds the following rankings:
 - Third among top research medical schools, with top five rankings in the following specialties: AIDS, geriatrics, internal medicine, pediatrics and women's health
 - First in nursing, with top ten rankings in community/public health nursing, family nurse practitioner and nursing service administration
 - First in graduate public health
 - Fifth in graduate biology, with top ten rankings in biochemistry, cell biology, immunology, neuroscience, and molecular biology

Industry Snapshot –Life Sciences in Maryland

- Employment (2013) – 35,590 private sector jobs (40,710 including public sector)

Leading subsectors:

- Research and development – 20,300 jobs
- Testing, medical and diagnostic laboratories – 7,000 jobs
- Pharmaceutical and medicine manufacturing – 6,900 jobs
- Business establishments (2013) – 2,120
- Total wages (2013) – \$3.77 billion
- Average salary (2013) – \$92,480
- Gross state product (2012) – \$16.99 billion
- Federal procurement (FY2013) – \$260 million

Sources: Maryland Department of Labor, Licensing and Regulation; U.S. Bureau of Economic Analysis; U.S. Census Bureau.

Employment by Occupation

Maryland Employment – May 2013

Selected Occupations	Employment	Location Quotient*	
		Index	Rank
Biochemists and biophysicists	1,330	2.40	4
Microbiologists	1,290	3.39	2
Biological scientists, all other	3,620	5.72	1
Medical scientists, except epidemiologists	4,730	2.37	2
Life scientists, all other	610	3.74	5
Chemists	3,240	1.94	3
Physical scientists, all other	2,080	4.66	2
Biomedical engineers	650	1.71	6
Biological technicians	3,580	2.61	2
Medical and clinical laboratory technicians	3,890	1.30	8
Life, physical and social science technicians, all other	2,910	2.46	1

* Location Quotient indicates concentration of the occupation in Maryland, with national average equal to 1.0.
Rank indicates Maryland's rank among the 50 states.

Source: U.S. Bureau of Labor Statistics, Occupational Employment Statistics.

Assets & Resources

- **BioMaryland Center** – State office connects life sciences companies, academic and federal researchers with potential sources of capital, partners, clients, and other resources.
- **National Institutes of Health** – Headquarters for federal biomedical and health-related research, with 18,000 employees in Bethesda, Rockville, Frederick and Baltimore.
- **Food and Drug Administration** – Headquarters for federal food and drug regulation, with over 7,000 employees in Maryland.
- **Institute for Bioscience and Biotechnology Research** – Joint research enterprise to enhance collaboration among University System of Maryland institutions and NIST.
- **Battelle Eastern Science and Technology Center** – Non-profit research center in Harford County devoted to biological and chemical sciences and technology research.
- **J. Craig Venter Institute** – Genomics research institute located in Rockville.
- **Biomedical Research Institute** – Not-for-profit research institute, with a major emphasis on basic research in schistosomiasis.

- **Walter Reed National Military Medical Center** – Medical research and health care for the uniformed services.
- **U.S. Army Medical Research Institute of Infectious Diseases** – The Army's main institution and facility for infectious disease research that may have defensive applications against biological warfare.
- **National Biodefense Analysis and Countermeasures Center** – Federally funded R&D center for laboratory-based threat assessment and bioforensics.
- **Science and Technology Park at Johns Hopkins** – Research and biotechnology park adjacent to the Johns Hopkins Medical Campus in East Baltimore.
- **University of Maryland BioPark** – University-associated research park in downtown Baltimore that accelerates biotechnology commercialization.

New & Expanding Businesses

- **U.S. Army Center for Environmental Health Research** (Frederick County) – Built a new 2,145-square-foot vivarium at Fort Detrick to be used for rodent research and observation. The lab took 19 months to complete at a cost of about \$2 million. (January 2014)
- **DK Diagnostics** (Frederick County) – Plans to invest \$1 million in operations in the state and grow to 20 employees over the next two years. The Sao Paulo-based biotechnology company, which manufactures and markets a parasite testing kit, currently employs four in Frederick. (December 2013)
- **Emergent BioSolutions** (Montgomery County) – Announced plans to buy a Gaithersburg building and move its headquarters and 112 employees from Rockville, as well as add 133 jobs at the new location over the next five years. Emergent already has a research and development facility with 123 employees adjacent to the one targeted for its new base. (September 2013)
- **Precision for Medicine** (Frederick County) – Will expand its biorepository and lab operations in the City of Frederick, with assistance from the city and DBED. The provider of specialized services, technology and infrastructure for life sciences companies, will add 110 new employees to the current staff of 65 in Frederick. (August 2013)
- **Precision for Medicine** (Montgomery County) – Will consolidate and expand its headquarters in a new location in Bethesda, with assistance from the county and DBED. The provider of specialized services, technology and infrastructure for life sciences companies, will add 59 new employees to the current staff of 16 at its corporate office. (August 2013)
- **Lieber Institute for Brain Development** (Baltimore City) – Has leased another 13,000 square feet at the Johns Hopkins Science + Technology Park, growing its space by half. The brain research center also plans to hire 15 to 20 more scientists, increasing its staff to nearly 100. (July 2013)
- **Cytomedix** (Montgomery County) – Is hiring 13 new employees, thanks to a \$27.5 million fundraising round including a \$500,000 investment by the Maryland Venture Fund and InvestMaryland program. The regenerative medicine company will expand its current staff of 55 in Gaithersburg. (April 2013)
- **MedImmune** (Montgomery County) – Will gain 300 jobs at its Gaithersburg headquarters under a U.S. consolidation by British parent AstraZeneca. The Gaithersburg campus will become one of three global research and development centers as well as the pharmaceutical company's hub for U.S.-based marketing and specialty care commercial functions. (March 2013)
- **United States Diagnostics Standards** (Montgomery County) – Will relocate its headquarters to a 10,000-square-foot office in the Shady Grove Life Sciences Center in a few months. The independent review body for medical diagnostics plans to ramp up its work force from only a handful of employees to about 20 professionals in the near term. (March 2013)
- **Pharmaceutics International** (Baltimore County) – Has been honored with the 2012 Baltimore County New Directions Award. The drug developer and manufacturer has added 300 employees in Hunt Valley over the past three years and expects to add 20 to 30 more jobs by the end of 2012. (November 2012)

Programs & Incentives

- **Maryland Biotechnology Investment Incentive Tax Credit** – Income tax credits equal to 50 percent of an eligible investment for investors in qualified Maryland biotechnology companies, up to \$250,000.
- **Maryland Venture Fund** – State funded seed and early-stage equity fund.
- **Maryland Technology Development Corporation** – Facilitates technology transfer from academic and federal labs into the private sector with seed funding, technical assistance and entrepreneurial support programs.
- **Research & Development Tax Credit** – Credit for R&D expenses for certified businesses.

Contact for assistance:

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